# minoCENS®

# User Guide

## Level Dependent
## Electronic Hearing Protection

**Contains important information - do not throw away**

CE **EN352**

Pure tone

**Version 2.01**
**January 2014**

# Mino CENS®

The Mino CENS® is manufactured by Puretone Ltd for protection against noise. They are classed as PPE and have been shown to comply with the European PPE Directive 89/686/EEC through the harmonised European standard EN 352 (test results in the rear of this manual).

Certification body: SATRA Technology Centre, Kettering, Northants, UK (Notified Body 0321).

# Disposal Information

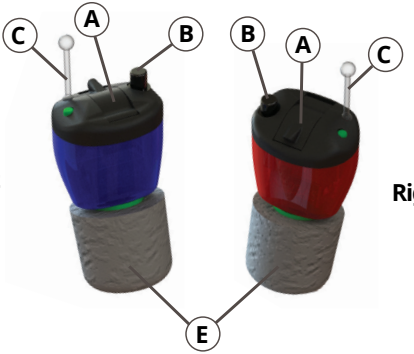
Within the European Union, the marked equipment is covered by "Directive 2002/96/EC of the European Parliament and of the Council of 27 January 2003 on waste electrical and electronic equipment." Amended by "Directive 2003/108/EC" (WEEE).

Recycle Mino CENS®, batteries and accessories according to national regulations.

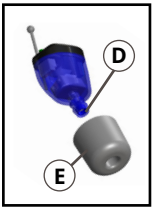
# Contents of Pack

Left and right devices fitted with medium black ear tip
2 wax tools fitted with red and blue replacement filters
Brush with magnet
6 batteries (size 10A)
5 pairs of various sized foam ear tips
Black zip pouch
User guide

# Your Mino CENS®




**Left** **Right**




A) Battery tray
B) Push-Button volume control
C) Extraction cord
D) Wax guard
E) Foam ear tip

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# Product Markings

The left and right models can be identified by the colour of the shell:
**Blue for left-ear** and **red for right-ear.**

Every Mino CENS® can be identified by a unique serial number located on the side of the device, and by the manufacturer's name and model ID on the opposite side of the device.

# Warnings & Safety Notes

## CAREFULLY READ THESE INSTRUCTIONS BEFORE USING THIS PRODUCT

This product is designed to protect your hearing. However, always remember that no item of PPE can provide full protection and care must always be taken while carrying out the risk-relation activity.

Explanation of symbols:

**WARNING** points out a situation that could lead to possible injuries.

**NOTICE** Indicates possible device damage.

Advice and tips on how to handle your device better.

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## PERFORMANCE & LIMITATIONS OF USE

Failure to follow these instructions may reduce the product life and reduce the hearing protection.

The output of the level dependent circuit of this hearing protector may exceed the daily limit sound level.

Always wear your Mino CENS® in noisy environments.

If children or disabled persons need to wear Mino CENS®, ensure adequate supervision.

Small parts present a choking hazard. Keep away from children.

If swallowed, consult medical advice immediately.

Do not expose Mino CENS® to extreme heat or moisture.

Do not expose Mino CENS® to strong magnetic fields (>0.1T).

# Warnings & Safety Notes

## PERFORMANCE & LIMITATIONS OF USE (CONTINUED)

Do not expose Mino CENS® to X-rays.

Do not use Mino CENS® in areas with explosive hazards (i.e. mines).

Always ensure the Mino CENS® is working correctly. A melody will be heard when activated initially.

It is recommended to always carry spare batteries.

Performance may deteriorate with battery usage. The typical period of continuous use that can be expected from the Mino CENS® battery is over 50 hours. For infrequent use replace the battery each time used.

A series of warning bleeps will periodically sound when the battery becomes low and requires changing.

**NOTICE** Always switch off when not in use.

## FITTING AND SIZING

Always use the correct size tip (see instructions) to maintain protection levels (see page 7).

Do not wear without a ear tip fitted as the hearing protection will be severely degraded.

Always inspect the ear tips before use and replace if damaged.

As a reusable device, ensure the fit is correct and providing adequate protection, see instructions for “clap test” (see page 11).



Sizes supplied are 10.5mm to 14mm.

It is recommended to replace the ear tips every 30 days.

# Warnings & Safety Notes

**COMPATIBILITY -** Only use spare parts designed for the Mino CENS®. Lists of spare ear tips, wax guards and batteries is in this manual.

The design of the device makes it compatible for use with most other types of PPE equipment. If unsure consult the supplier/manufacturer.

**STORAGE & TRANSPORT**

Always place the Mino CENS® in the supplied case after use to keep them safe.

If the Mino CENS® become wet, remove the battery and ear tip and then wipe with a dry cloth and leave in a warm place to dry out.

**REPAIR**

If the product becomes damaged, it will NOT provide the optimum level of protection, and therefore should be immediately either replaced or repaired. There are no serviceable parts (except those listed as spares). A troubleshooting guide is contained in this manual (see page 14).

**CLEANING**

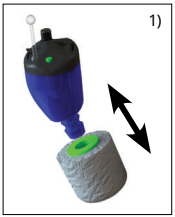
This product may be adversely affected by certain chemical substances. Further information should be sought from the manufacturer.

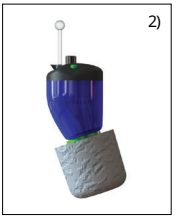
**MARKING -** The product is marked on the shell with a serial number and a model ID.

# Foam Ear Tips

Mino CENS® devices are supplied with 5 different sized foam ear tips:

To find out which ear tip suits the size of your ear canal you will need to try all 5 to see which is the most comfortable and creates the best seal. If the tip is too small then the device could fall out. If the ear tip is too large then it will be uncomfortable and hard to insert.




Gently push the foam ear tip onto the Mino CENS® (1) until it fits against the shell of the device (2).

After each use the ear tips should be cleaned with a dry cloth or replaced if damaged.

# Ear Tip Range

| Colour | Size | Manufacturers Part Number (per pair) |
|---|---|---|
| Green | 10.5mm - Short | ACC102M-GREEN |
| Blue | 10.5mm - Long | ACC102M-BLUE |
| Black | 12mm - Short | ACC102M-BLACK |
| Red | 12mm - Long | ACC102M-RED |
| Orange | 14mm - Long | ACC102M-ORANGE |

To order replacement foam ear tips please consult your supplier or purchase from our online shop: www.puretoneretail.net.

# Handling Batteries

We recommend using only Rayovac or PureCell Plus 10A batteries.

10A Zinc Air Battery

Always use the correct size of batteries, as supplied with your Mino CENS®.

Remove the tab on new batteries only when you are ready to use them. Once the tab is removed the battery will discharge and will only last up to one month while the Mino CENS® is not in use.

Always keep spare batteries with you. Use a fresh battery each time if you only use Mino CENS® infrequently.

If the battery fails during use and is not replaced, your protection will not be compromised, but ambient awareness will be lost.

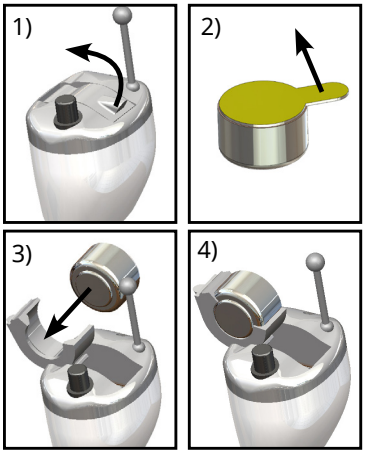
To order replacement batteries please consult your supplier or purchase from our online shop: www.puretoneretail.net.

## Inserting The Battery

(1) Open the battery tray with a fingernail and swing outwards until fully open (do not use force, stop when you feel resistance).

(2) Pull off the protective tab from the new battery and wait a few seconds for air to enter the battery and begin to activate.

(3 & 4) Insert the new battery with the small shouldered side first into the largest opening of the battery compartment.



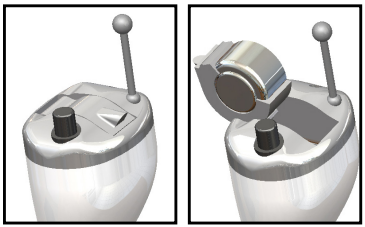

## Removing The Battery

Open the battery tray. Gently ease the battery out of the battery compartment. Using the magnet on the end of the brush supplied with Mino CENS® may make this easier.

## Turning Your Mino CENS® On & Off

Mino CENS® is switched on automatically with the insertion of the battery and the closing of the battery tray.

After a 5 second delay a melody will play indicating that the Mino CENS® is active.



Device is on Device is off

# Adjusting The Volume

The volume is adjustable via the push-button.

The volume push-button has three preset levels:

**Level 1: Low (+5dB)**

**Level 2: Medium (+11dB)**

**Level 3: High (+18dB)**

By default, when the device is turned on Level 1 (low) will always be active.

Pressing the button once will increase the volume to Level 2 (medium).

Pressing the button again will increase the volume to Level 3 (high).

Pressing the button for a third time will reduce the volume back to Level 1 (low).

Each time you change levels, a number of confirmation beep(s) will be heard corresponding to the level of volume selected (1-3).

Once the devices are switched on, you will be able to hear sound as normal; however, when a loud sound is detected the device will automatically reduce the volume to a safe and comfortable level. After the loud sound has passed the volume is automatically returned to normal.

The volume push-button must only be operated with light pressure. Applying excessive pressure can result in the volume push-button being damaged. This is a precision miniature device that must be handled with care.

This ear-plug is provided with level-dependent attenuation. The wearer should check correct operation before use. If distortion or failure is detected, the wearer should refer to the manufacturers advice for maintenance and replacement of the battery.

# Inserting Your Mino CENS®

**Insertion**
(1) Hold the Mino CENS® with the volume push-button at the top.

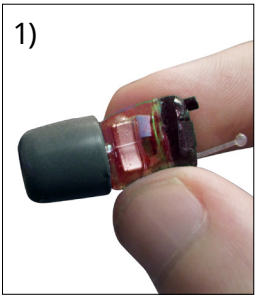
Reduce the diameter of the foam ear tip by gently rolling it in your fingers before pressing it into the ear.

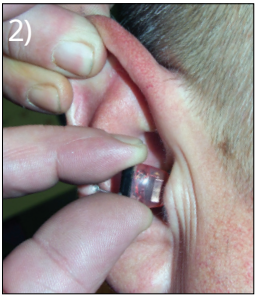
(2) Pull the ear up while inserting.

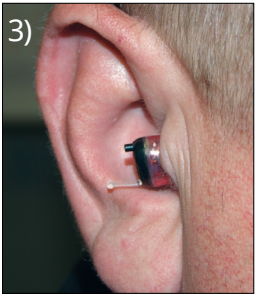
(3) Push gently until the foam ear tip seals in the ear canal.

Allow at least 10 seconds for the foam ear tip to expand and take up the shape of your ear canal.

**Clap Test**
It is important that each device is fitted correctly to ensure safe and effective use. To check the fit is correct, clap your hands near each ear. You should hear the sound but at a lower level.




# Removing Your Mino CENS®

**Removal**
Gripping the extraction cord, gently withdraw the Mino CENS® from the ear. After removal, clean the Mino CENS® and place in the protective case provided.

**In the extremely unlikely event of the ear tip remaining in the ear on removal:**

**Do not panic**
**Do not attempt to remove by yourself**
**Seek medical advice**

# Cleaning and Disinfection

Mino CENS® are highly sensitive systems. It is recommended that Mino CENS® are cleaned after every use to keep them in perfect working condition and to avoid health problems.

Clean the outside housing and foam ear tip of Mino CENS® with a soft dry cloth or tissue, removing any debris or moisture.

Replace the foam ear tip if the ear tip looks damaged or debris cannot be removed.

Holding Mino CENS® with the foam ear tip pointing down over a tissue, use the brush to gently remove debris around the sound outlet and wax guard. Any debris should fall onto the tissue which can then be discarded.

# Wax Guards

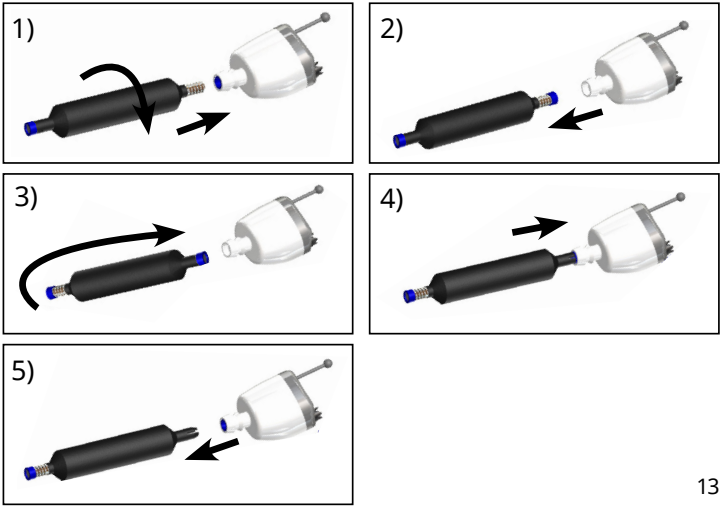
To minimise the risk of blocking and damage caused by the build-up of earwax, each Mino CENS® is fitted with a Micro PureGuard. Mino CENS® is supplied with 2 wax guard changing tools, with a spare red and blue wax guard attached. Replacement packs of wax guards are available separately.

To order replacement wax guards please consult your supplier or purchase from our online shop: www.puretoneretail.net.

| Side | Colour | Quantity | Manufacturers Part Number |
|---|---|---|---|
| **Right** | **Red** | **15** | **ACC315D-HF4** |
| **Left** | **Blue** | **15** | **ACC315C-HF4** |

Changing the wax guard requires the use of the Micro PureGuard tool (supplied initially with Mino CENS®, as well as with replacement wax guard kits). Please see below for the correct procedure for changing the wax guard. Do not attempt to change the wax guard without using the tool.

Changing The Wax Guard (Blue/Left Side Shown)



# Troubleshooting

Use these tips to resolve simple issues.

| Problem | Possible Solution |
|---|---|
| Sound is weak. | Replace empty battery.<br>Replace blocked wax guard.<br>Increase volume.<br>Clean instrument.<br>Close battery door completely. |
| Mino CENS® emits whistling sounds. | Re-insert the instrument until it fits securely.<br>Clean instrument.<br>Fit new ear tip. |
| Sound is distorted. | Replace empty battery.<br>Replace blocked wax guard.<br>Lower volume.<br>Clean instrument. |
| Mino CENS® emits a series of warning bleeps. | Replace empty battery. |
| Mino CENS® does not work. | Check if the Mino CENS® is turned on.<br>Gently close battery compartment completely.<br>Replace empty battery.<br>Make sure battery is inserted correctly.<br>Replace blocked wax guard. |

Consult your supplier if you encounter further problems.

# Technical Information (EN352)

Sound Attenuation

| Frequency (Hz) | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |
|---|---|---|---|---|---|---|---|---|
| Mean Attenuation | 26.1 | 27.5 | 27.8 | 31.4 | 34.3 | 34.9 | 41.4 | 44.4 |
| Standard Deviation | 5.6 | 5.5 | 4.9 | 5.9 | 8.2 | 4.5 | 3.6 | 5.0 |
| Assumed Protection | 20.5 | 22.0 | 22.9 | 25.5 | 26.0 | 30.4 | 37.7 | 39.4 |

**H**=32

**M**=27

**L**=25

**SNR**=31

Criterion Levels

| H | M | L |
|---|---|---|
| >99 | >99 | >99 |

SNR = Single Number Rating attenuation
H = High frequency attenuation
M = Medium frequency attenuation
L = Low frequency attenuation

| External Level dB (A) | 59.5 | 64.5 | 69.5 | 74.5 | 79.5 | 84.5 | 89.5 | 94.5 | 99.6 |
|---|---|---|---|---|---|---|---|---|---|
| High | 68.6 | 70.1 | 69.6 | 69.2 | 69.2 | 70.3 | 71.4 | 72.0 | 73.2 |

| External Level dB (A) | 59.5 | 64.2 | 69.2 | 74.2 | 79.2 | 84.2 | 89.2 | 94.1 | 99.1 |
|---|---|---|---|---|---|---|---|---|---|
| Medium | 66.6 | 68.0 | 68.0 | 68.0 | 68.1 | 68.5 | 69.2 | 70.7 | 73.7 |

| External Level dB (A) | 59.5 | 64.5 | 69.5 | 74.5 | 79.5 | 84.4 | 89.3 | 94.2 | 99.0 |
|---|---|---|---|---|---|---|---|---|---|
| Low | 64.9 | 66.1 | 66.4 | 66.5 | 66.8 | 67.5 | 68.8 | 71.1 | 74.7 |

Tests carried out at maximum volume

EN352-2:2002 EN352-7:2002

Tested by:
SATRA Ltd, Wyndham Way, Telford Way, Kettering, Northamptonshire, NN16 8SD. UK. (Notified Body No. 0321).

Further information can be obtained from Puretone Ltd, 9-10 Henley Business Park, Trident Close, Medway City Estate, Rochester, Kent. ME2 4FR. UK.

Designed and manufactured in the UK by:

Puretone Ltd, 9-10 Henley Business Park,
Trident Close, Medway City Estate, Rochester,
Kent. ME2 4FR. UK.

Puretone Ltd are an LRQA (NB0088) certified
company to:

ISO 9001:2008
ISO 13485:2003
MDD 93/42/EEC

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Mino is a trademark of Puretone Ltd

EN352-2:2002 & EN352-7:2002, by SATRA, UK.